Biology Toolkit: Indicator 1.5.6

Student Handout: Biology: Indicator 1.5.6

Goal 1.0 Skills And Processes

Expectation 1.5 The student will use appropriate methods for communicating in writing and orally the processes and results of scientific investigation.

Indicator 1.5.6 The student will read a technical selection and interpret it appropriately.

Public Release - Selected Response Item - Released in 2007

Biology Indicator 1.5.6

Use the technical passage "Exotic Species Versus Native Species, Who's Winning?" to answer the following:

Which of these explains why the number of exotic organisms is increasing in ecosystems around the world?

A. The amount of global travel is increasing.
B. Increasing temperatures favor non-native organisms.
C. Native organisms are migrating to more remote locations.
D. The number of prey organisms is increasing worldwide.

Correct Answer
A. The amount of global travel is increasing.

Item

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Handouts

EXOTIC SPECIES VERSUS NATIVE SPECIES, WHO'S WINNING?

The introduction of non-native or "exotic" organisms is thought to be responsible for about half of the endangered or threatened species in the United States. This often happens by the "crowding out effect," in which an exotic plant or animal survives better than a native organism. Exotic species usually have no natural predators or parasites in their new environments. This enables them to take over entire areas where native species used to live. Biologists call this phenomenon eco-invasion. Chris Bright, an author on this subject, says that a non-native species will establish itself by adjusting to its new surroundings. "It tends to get better and better at exploiting an area's resources and at suppressing native species," says Bright.

The island of Guam is an example of an area that has been affected. The brown tree snake was accidentally introduced to the island about 60 years ago. Since then, nine of eleven native bird species have become extinct due to overpopulation by the brown tree snake.

Another example involves the Eurasian zebra mussel. Scientists believe this mussel was accidentally transported to the United States by ships in 1988. Colonies of the zebra mussels have since caused costly damage to waterpipes around the Great Lakes.

Airplane and boat traffic across the world has been blamed for the introduction of exotic organisms. Species are usually contained in certain areas because of natural borders such as mountains, oceans, and deserts. However, natural borders are no longer effective boundaries with the increase in worldwide travel.